

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave.St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-016690**Date Inspected:** 11-Sep-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China

<b>CWI Name:</b>	N/A	<b>CWI Present:</b>	<b>Yes</b>	<b>No</b>
<b>Inspected CWI report:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Rod Oven in Use:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Electrode to specification:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Weld Procedures Followed:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Qualified Welders:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Verified Joint Fit-up:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Approved Drawings:</b>	<b>Yes</b> <b>No</b> <b>N/A</b>	<b>Approved WPS:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
		<b>Delayed / Cancelled:</b>	<b>Yes</b>	<b>No</b> <b>N/A</b>
<b>Bridge No:</b>	34-0006	<b>Component:</b>	OBG Trial Assembly	

**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Segment 9AE (Traveler Rail Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Traveler Rail Bracket to the Side Panel, Bike Path side at Panel Points (PP) 72 and PP 73 for Segment 9AE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00485 dated September 11, 2010.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M22 x 160 RC Lot# DHGM220006 and the final torque value established was 340 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

Segment 9BE (Traveler Rail Brackets)

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## WELDING INSPECTION REPORT

( Continued Page 2 of 6 )

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This QA Inspector witnessed the final bolt tension verification on bolts connecting the Traveler Rail Bracket to the Side Panel, Bike Path side at Panel Points (PP) 74, PP 75 and PP 76 for Segment 9BE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00485 dated September 11, 2010.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M22 x 160 RC Lot# DHGM220006 and the final torque value established was 340 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

### Segment 9CE (Traveler Rail Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Traveler Rail Bracket to the Side Panel, Bike Path side at Panel Points (PP) 77, PP 78 and PP 79 for Segment 9CE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00485 dated September 11, 2010.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M22 x 160 RC Lot# DHGM220006 and the final torque value established was 340 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

### Segment 9DE (Traveler Rail Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Traveler Rail Bracket to the Side Panel, Bike Path side at Panel Points (PP) 80, PP 81 and PP 82 for Segment 9DE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00485 dated September 11, 2010.

The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M22 x 160 RC Lot# DHGM220006 and the final torque value established was 340 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

### Segment 9EE (Traveler Rail Brackets)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Traveler Rail Bracket to the Side Panel, Bike Path side at Panel Points (PP) 83, PP 84 and PP 85 for Segment 9EE. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00485 dated September 11, 2010.

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## WELDING INSPECTION REPORT

( Continued Page 3 of 6 )

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The bolt sizes used were M22 x 120 RC Lot # DHGM220053 and the final torque value established was 440 N-m.

The bolt sizes used were M22 x 160 RC Lot# DHGM220006 and the final torque value established was 340 N-m.

The Manual Torque wrench used was Serial No. XO2-666. Please reference the pictures attached for more comprehensive details.

### Cross Beam 11(Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is connected to Cross Beam Bottom Panel I-Ribs at Panel Point (PP) 74 and PP 75 for Cross Beam 11. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00485 Dated September 11, 2010.

Bolt sizes used were M16 x 45 RC Set# DHGM160010 and final torque required was 200 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-666. Please reference the pictures attached for more comprehensive details.

### Cross Beam 12(Catwalk)

This Quality Assurance (QA) Inspector witnessed final bolt tension verification for Catwalk structure which is connected to Cross Beam Bottom Panel I-Ribs at Panel Point (PP) 80 and PP 81 for Cross Beam 12. Inspected 10% on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00485 Dated September 11, 2010.

Bolt sizes used were M16 x 45 RC Set# DHGM160010 and final torque required was 200 N-m.

Bolt sizes used were M16 x 50 RC Set# DHGM160011 and final torque required was 200 N-m.

The Manual Torque wrench used was Serial No. XO2-666.

### Segment 9BE (Handrails)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Handrail to Fiber Glass Grating between Panel Points (PP) 74 and PP 75 for Segment 9BE. Handrails are installed at Side Panel Cross Beam side at FL3 area. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00486 dated September 11, 2010.

The bolt sizes used were M16 x 95 RC Lot # DHGM160018 and the final torque value established was Snug Tight.

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## WELDING INSPECTION REPORT

( Continued Page 4 of 6 )

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A spanner wrench was used to verify the snug tight condition.

### Segment 9DE (Handrails)

This QA Inspector witnessed the final bolt tension verification on bolts connecting the Handrail to Fiber Glass Grating between Panel Points (PP) 80 and PP 81 for Segment 9DE. Handrails are installed at Side Panel Cross Beam side at FL3 area. The QA Inspector verified the bolt tension on a random basis and the results appeared to be in general compliance. The Inspection was performed against Notification No. 00486 dated September 11, 2010.

The bolt sizes used were M16 x 95 RC Lot # DHGM160018 and the final torque value established was Snug Tight.

A spanner wrench was used to verify the snug tight condition.

### Lift 9 East (Steel Cable)

This QA Inspector witnessed the final tension verification for steel cable connecting diagonally the Cable Tray Crosby Clips. Cable Trays are installed at Bottom Panel Cross Beam and Bike Path side between Panel Points (PP) 71.25 and PP 85.25 at various locations for Segment 9AE, Segment 9BE, Segment 9CE, Segment 9DE and Segment 9EE. The QA Inspector verified the tension of steel cable by pulling and pushing manually and the results appeared to be in general compliance.

The Panel Points (PP) where steel cables are installed for cable trays are identified as below.

PP71.25 to PP 72.

PP73 to PP 74.

PP76 to PP 77.

PP78 to PP 79.

PP79 to PP 80.

PP82 to PP 83.

The Inspection was performed against Notification No. 00486 dated September 11, 2010.

### Suspender Bracket at Paint Shop

This QA Inspector performed Dimension Control Inspection along with ABF QA Inspector to check and measure the Suspender Bracket (SB) lifting rod hole spacing by placing the socket template at the following suspender brackets.

SB 76E which will be installed at Segment 9BE, Bike Path side.

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## WELDING INSPECTION REPORT

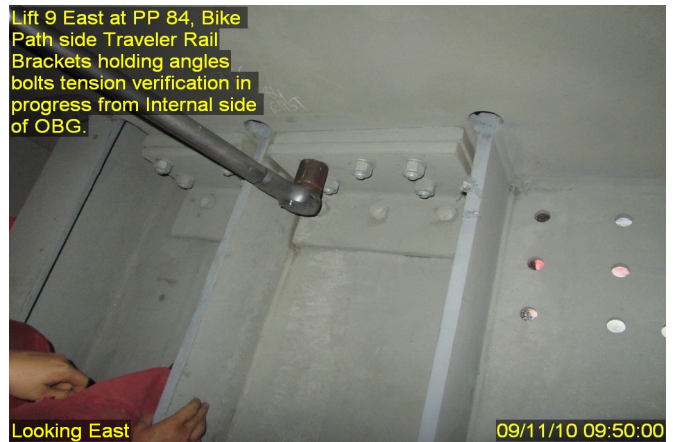
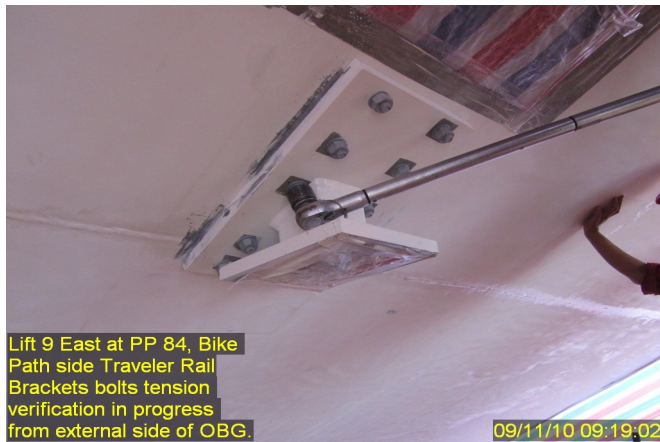
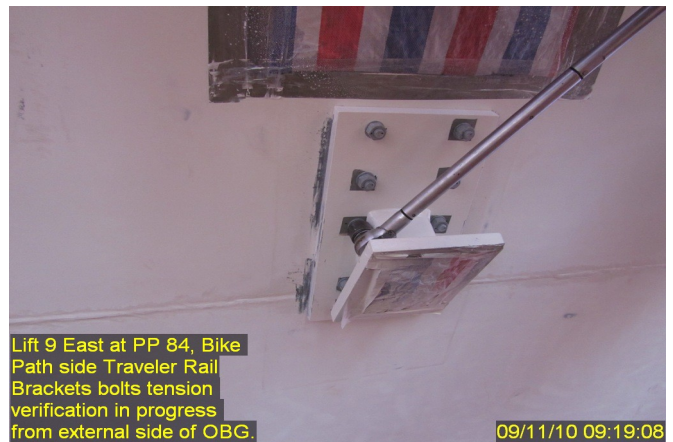
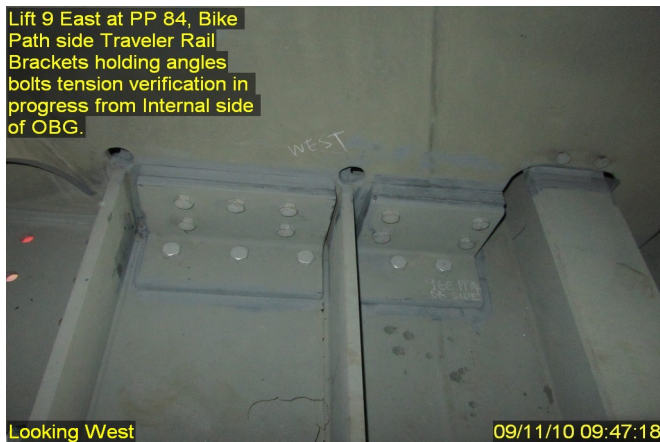
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SB 74W which will be installed at Segment 9BW, Counter Weight side.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.





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# WELDING INSPECTION REPORT

( Continued Page 6 of 6 )

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## Summary of Conversations:

No relevant conversations were reported on this date.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

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**Inspected By:** Math,Manjunath

Quality Assurance Inspector

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**Reviewed By:** Peterson,Art

QA Reviewer